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S.N. 09/988,102

REMARKS

Continued examination is respectfully requested in view of the following remarks.

Examiner's Interview

Applicants' representative wishes to convey his appreciation to the Examiner for the telephonic interview conducted September 17, 2003 clarifying that the McHugh reference cited in the Office Action was U.S. Patent No. 5,390,744.

Allowable Subject Matter

The Applicants note with appreciation the Examiner's indication of allowable subject matter. In particular, claims 5-7, 9-12, 14-16, 26-28, and 31-33 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Disposition of Claims

Claims 1-33 are pending in the instant application. However, claims 17-24 have been withdrawn from consideration based on the Applicants' provisional election of these claims in response to the restriction requirement applied by the Examiner in his Office Action dated July 2, 2003. Finally, claims 1-4, 8, 13, 25, 29 and 30 have been rejected based on prior art.

Summary of Prior Art Rejections

The Examiner rejected claims 29 and 30 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,390,744 to

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McHugh ("McHugh"). In addition, the Examiner has rejected claims 1-4, 8, 13 and 25 under 35 U.S.C. §103(a) as being unpatentable over the McHugh reference in view of U.S. Patent No. 5,799,688 to Yie ("Yie").

Claimed Invention Is Not Anticipated by the McHugh Reference

As noted above, the Examiner rejected claims 29 and 30 under 35 U.S.C. §102(b) as being anticipated by McHugh.

The Examiner asserts that the McHugh reference discloses a single piece manifold for a sprinkler system comprising a body defining a conduit therethrough, an inlet to the conduit for connecting the manifold to a supply of water, an outlet to the conduit for connecting the manifold to the fire sprinkler system, a main valve 44 in the conduit for movable between an open position in which water may enter the body and a closed position in which water is prevented from passing through the body, a check valve arrangement within the conduit for preventing the reflux of water back into the water supply, and a vent passageway 68 in communication with the conduit, wherein the check valves are biased closed by a spring means. The Examiner further asserts that McHugh reference discloses a fire alarm means for preventing the sounding of a false alarm. Finally, the Examiner contends that the McHugh reference discloses a means for preventing the sound of false alarms using an alarm valve and including a first valve and a second valve.

A review of the McHugh reference discloses a backflow prevention and flow detection arrangement comprising a first check valve 55 in series with an alarm valve 70 which communicate with a conduit 30. A hydraulically actuated relief valve 90 is also in communication with the main conduit 30

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through a line 63. In operation, when the pressure in the conduit 30 upstream of the first check valve 55 is greater than the pressure in the passageway of the plumbing fitting 86, the hydraulically actuated relief valve 90 is closed. When the pressure in the main conduit 30 upstream of the first check valve 55 is less than the pressure in the passageway of the plumbing fitting 86, the hydraulically actuated relief valve 90 is open that allows fluid to drain through pipe 68.

In contrast, independent claim 29 recites a single-piece manifold comprising a body having a flowpath therethrough, an inlet to said flowpath for connecting said body to a supply of water, an outlet to said flowpath for connecting said body to said sprinkler system, and a means for preventing the sounding of false alarms. The means disclosed in the specification for preventing the sounding of an alarm constitutes a vent passageway 92 that communicates with a conduit 18 in a space defined between the first and second check valves 38, 40 through an opening 90, while the other end of the vent passageway 92 communicates with atmosphere through an outlet 88 formed adjacent a combination valve 84. See Page 15, lines 12-21. When an excess pressure condition, such as a pressure surge from the water supply occurs, the excess pressure is bled from conduit 18 through vent passageway 92 in order to prevent false alarms caused by pressure surges in the water supply which may potentially open both first and second valves 38, 40.

The McHugh reference does not teach or suggest a means for preventing the sounding of a false alarm utilizing a vent passageway 92 in combination with first and second check valves as recited in independent claim 29. As noted above, the McHugh reference utilizes a hydraulically-actuated relief valve 90 in

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communication with a line 63 that is in communication with the main conduit 30 upstream of the first check valve which allows fluid to exit through pipe 68, rather than a vent passageway that communicates with the space between the first and second check valves to prevent false alarms as presently claimed by the Applicants. Therefore, the means for preventing the sounding of false alarms claimed by the Applicants is structurally and functionally distinguished from the valve and pipe arrangement of McHugh. Accordingly, the McHugh reference does not anticipate independent claim 29 and the Examiner is respectfully requested to withdraw his rejection of the claim and indicate the allowance thereof. In addition, the Examiner is respectfully requested to withdraw his rejection of dependent claim 30 by virtue of its dependency from independent claim 29.

Claimed Invention Is Unobvious Over McHugh In View Of Yie

The Examiner has rejected claims 1-4, 8, 13 and 25 under 35 U.S.C. §103(a) as being unpatentable over McHugh in view of Yie.

The Examiner asserts that the McHugh reference discloses a single-piece manifold for a fire sprinkler system as noted above. However, the Examiner admits that McHugh does not include a vent passageway for preventing water from flowing through the conduit when there is a pressure surge in the water supply.

The Examiner also asserts that the Yie reference discloses a water discharge system comprising an over-protection valve to protect a fluid system from damage caused by a sudden increase in the system pressure. The Examiner concludes that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of McHugh by replacing the relief valve of McHugh with an over

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pressure protection valve as being allegedly taught by Yie in order to protect the system from water pressure surges.

A review of the Yie reference discloses a pressure valve having an arrangement comprising a fluid inlet, a first chamber, a throughbore, a second chamber, a fluid outlet and a valve stem. The valve stem is mounted within a valve body and has different diameters which communicate with first and second chambers. A pressure condition within one or more of the chambers acts upon the valve stem to urge the stem in either an open position or closed position to prevent an overpressure condition.

In contrast, independent claim 1 recites the limitation of a vent passageway in communication with a conduit for preventing water from flowing through the conduit when there is a pressure surge in the water supply. This particular limitation is neither taught nor suggested in the prior art. As noted by the Examiner, the McHugh reference does not teach this limitation, while the Yie reference is directed to an automatic flow control valve that does not disclose any type of vent passageway. Specifically, the Yie reference discloses a valve stem mounted within the a valve body wherein a pressure condition within one or more chambers urges the valve stem into either open or closed positions. However, there appears no teaching or suggestion in the Yie reference of a vent passageway that prevents water flow during a pressure surge as recited in independent claim 1. In fact, the vent passageway of the present invention does not incorporate any type of valve, but rather communicates with the space defined between the first and second check valves 38, 40 through an opening 90 at one end, while the other end of the vent passageway communicates with atmosphere through an outlet

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88. Specifically, when an excess pressure condition, such as a pressure surge from the water supply occurs in the claimed invention, the excess pressure is bled from the space between the first and second check valves 38, 40 through vent passageway 92 in order to prevent false alarms caused by pressure surges in the water supply which may potentially open both first and second check valves 38, 40. Therefore, the automatic flow control valve of Yie is structurally and functionally different from the vent passageway recited in independent claim 1. Accordingly, the Examiner is respectfully requested to withdraw his rejection of independent claim 1 as well as dependent claims 2-4, 8 and 13 by virtue of their respective dependencies from claim 1 and indicate the allowance thereof.

Further, independent claim 25 has been amended to more clearly recite the limitation of a check valve assembly comprising first and second check valves, each having a valve body, hollow nose, and guide arms extending from the valve body with the tubular member of the first check valve being slidably received in the hollow nose of the second check valve to be slidably positioned between a closed position, wherein the first check valve engages the hollow nose of the second check valve to prevent fluid flow and an open position such that the first check valve disengages the hollow nose of the second check valve to permit fluid flow. Neither the McHugh nor the Yie references teach or suggest this particular limitation. In fact, the McHugh reference only discloses a spring loaded clapper-type check valve that is seated against a valve seat and does not cooperate with the second check valve in any manner as presently recited in claim 25 wherein the tubular member of the first check valve is engageable with the hollow nose of the second

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check valve. The Yie reference also does not teach this structural cooperation between first and second check valves.

Based on the foregoing, neither reference teaches or suggests the single-piece manifold as presently claimed and the Examiner is respectfully requested to withdraw his rejection of independent claim 25 and indicate the allowance thereof.

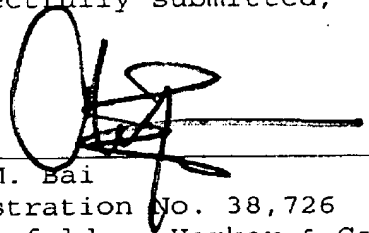
CONCLUSION

By the present response, the Applicants have made remarks and amendments responsive to the Examiner's rejection of the claims. In particular the Applicants have presented remarks that distinguish independent claims 1, 25 and 29 over the cited prior art. Accordingly, the application is in the condition for allowance and expeditions notice thereof is earnestly solicited.

The Examiner is requested to call the undersigned attorney collect if he has any questions related to the Applicants' remarks and/or amendments.

Respectfully submitted,

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Date



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